WHAT IS CLAIMED IS:

1. An oligonucleotide comprising a plurality of nucleotides, wherein:

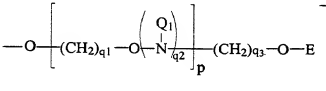
a first portion of said plurality of nucleotides have B-form conformational geometry and are joined together in a continuous sequence, at least two of said nucleotides of said first portion being ribonucleotides or arabinonucleotides; and

a further portion of said plurality of nucleotides are ribonucleotide that have A-form conformation geometry and are joined together in at least one continuous sequence.

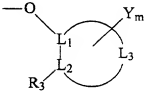
2. The oligonucleotide of claim 1 wherein each nucleotide of said first portion, independently, is a 2'-SCH_3 ribonucleotide, a 2'-NH_2 ribonucleotide, a 2'-$NH(C_1$-C_2 alkyl) ribonucleotide, a 2'-$N(C_1$-C_2 alkyl)$_2$ ribonucleotide, a 2'-CF_3 ribonucleotide, a 2'=CH_2 ribonucleotide, a 2'=CHF ribonucleotide, a 2'=CF_2 ribonucleotide, a 2'-CH_3 ribonucleotide, a 2'-C_2H_5 ribonucleotide, a 2'-CH=CH_2 ribonucleotide or a 2'-C≡CH ribonucleotide.

3. The oligonucleotide of claim 1 wherein each of said nucleotides of said first portion are joined together in said continuous sequence by phosphate, phosphorothioate, phosphorodithioate or boranophosphate linkages.

4. The oligonucleotide of claim 1 wherein each nucleotide of said further portion, independently, is a 2'-fluoro nucleotide or a nucleotide having a 2'-substituent having the formula I or II:



I



II

wherein

E is C_1-C_{10} alkyl, $N(Q_1)(Q_2)$ or $N{=}C(Q_1)(Q_2)$;

each Q_1 and Q_2 is, independently, H, C_1-C_{10} alkyl, dialkylaminoalkyl, a nitrogen protecting group, a tethered or untethered conjugate group, a linker to a solid support, or Q_1 and Q_2, together, are joined in a nitrogen protecting group or a ring structure that can include at least one additional heteroatom selected from N and O;

R_3 is OX, SX, or $N(X)_2$;

each X is, independently, H, C_1-C_8 alkyl, C_1-C_8 haloalkyl, C(=NH)N(H)Z, C(=O)N(H)Z or OC(=O)N(H)Z;

Z is H or C_1-C_8 alkyl;

L_1, L_2 and L_3 form a ring system having from about 4 to about 7 carbon atoms or having from about 3 to about 6 carbon atoms and 1 or 2 heteroatoms selected from oxygen, nitrogen and sulfur and wherein said ring system is aliphatic, unsaturated aliphatic, aromatic, or saturated or unsaturated heterocyclic;

Y is alkyl or haloalkyl having 1 to about 10 carbon atoms, alkenyl having 2 to about 10 carbon atoms, alkynyl having 2 to about 10 carbon atoms, aryl having 6 to about 14 carbon atoms, $N(Q_1)(Q_2)$, $O(Q_1)$, halo, $S(Q_1)$, or CN;

each q_1 is, independently, from 2 to 10;

each q_2 is, independently, 0 or 1;

m is 0, 1 or 2;

p is from 1 to 10; and

q_3 is from 1 to 10 with the proviso that when p is 0, q_3 is greater than 1.

5. The oligonucleotide of claim 1 wherein each of said nucleotides of said further portion, independently, is a 2'-F ribonucleotide, a 2'-O-(C_1-C_6 alkyl) ribonucleotide, or a 2'-O-(C_1-C_6 substituted alkyl) ribonucleotide wherein the substitution is C_1-C_6 ether, C_1-C_6 thioether, amino, amino(C_1-C_6 alkyl) or amino(C_1-C_6 alkyl)$_2$.

6. The oligonucleotide of claim 1 wherein all of said nucleotides of said further portion are joined together in a continuous sequence by 3'-5' phosphodiester, 2'-5' phosphodiester, phosphorothioate, Sp phosphorothioate, Rp phosphorothioate, phosphorodithioate, 3'-deoxy-3'-amino phosphoroamidate, 3'-methylenephosphonate, methylene(methylimino), dimethylhydrazino, amide 3, amide 4 or boranophosphate linkages.

7. The oligonucleotide of claim 1 wherein at least two of said nucleotides of said further portion are joined together in a continuous sequence that is positioned 3' to said continuous sequence of said first portion of said plurality of nucleotides.

8. The oligonucleotide of claim 1 wherein at least two of said nucleotides of said further portion are joined together in a continuous sequence that is positioned 5' to said continuous sequence of said first portion.

9. The oligonucleotide of claim 1 wherein at least two of said nucleotides of said further portion are joined together in a continuous sequence that is positioned 3' to said continuous sequence of said first portion and at least two of said further portion are joined together in a continuous sequence that is positioned 5' to said continuous sequence of said first portion.

10. The oligonucleotide of claim 1 wherein each nucleotide of said first portion, independently, is a 2'-SCH_3 ribonucleotide, a 2'-NH_2 ribonucleotide, a 2'-NH(C_1-C_2 alkyl) ribonucleotide, a 2'-N(C_1-C_2 alkyl)$_2$ ribonucleotide, a 2'=CH_2 ribonucleotide, a 2'-CH_3